CLAIMS

1   Claims 1-16 (Cancelled)

1   17. (Currently Amended) A synchronization pulse detector, comprising:

2   a shape detector for processing samples of an input signal having a synchronization pulse

3   and a plurality of non-synchronization pulses to determine whether such samples have a

4   predetermined sequence;

5   said predetermined sequence being a first, non-time varying portion, followed by a first,

6   time-varying portion, followed by a second, non-time varying portion, followed by a second,

7   time-varying portion, followed by a third, non-time varying portion, one of the first and second,

8   time-varying portions having a positive slope and the other one of the first and second, time-

9   varying portions having a negative slope;

10   wherein the slope of the time varying portions are determined by comparing said input

11   signal to a specified criterion based in part of the various slope requirements for the time varying

12   portions

13   <u>a time window for determining whether said samples are produced at a predetermined</u>

14   <u>rate expected for the series of synchronization pulses; and</u>

15   <u>a voltage window for determining whether the average value of one of said second time-</u>

16   <u>varying portions is substantially lower or the same as, but higher than the lower DC value</u>

17   <u>detected within the time-equivalent of a segment of video.</u>

1   18. (Previously Presented) The detector as claimed in claim 17, wherein said shape detector

2   produces a pulse when said predetermined sequence is detected.

1   19. (Currently Amended) A synchronization pulse detector, comprising:

2   a shape detector for processing samples of an input signal having a series of

3   synchronization pulses and a plurality of non-synchronization pulses to determine whether such

4   samples have a predetermined sequence;

5   said predetermined sequence being a first, non-time varying portion, followed by a first,

6   time-varying portion, followed by a second, non-time varying portion, followed by a second,

7   time-varying portion, followed by a third, non-time varying portion, one of the first and second,

8   time-varying portions having a positive slope and the other one of the first and second, time-

9   varying portions having a negative slope, wherein the slope of the time varying portions are

10   determined by comparing said input signal to a specified criterion based in part of the various

11   slope requirements for the time varying portions;

12   said shape detector producing a shape detection pulse each time said predetermined

13   sequence is detected; ~~and~~

14   <u>a time window for determining whether said shape detection pulse is produced at a</u>

15   <u>predetermined rate expected for the series of synchronization pulses; and</u>

16   <u>a voltage window for determining whether the average value of one of said second time-</u>

17   <u>varying portions is substantially lower or the same as, but higher than the lower DC value</u>

18   <u>detected within the time-equivalent of a segment of video; and</u>

19   an evaluator responsive to the produced shape pulse detection pulses for determining

20   whether such shape detection pulses are produced at a predetermined rate expected for the series

21   of synchronization pulses.

1   20. (Currently Amended) A synchronization pulse detector, comprising:

2   a shape detector for processing samples of an input signal having a series of

3   synchronization pulses and a plurality of non-synchronization pulses, each one of said

3

4   synchronization pulses preceding a segment of the input signal having non-synchronization

· 5   pulses, to determine whether such samples have a predetermined sequence;

6   said predetermined sequence being a first, non-time varying portion, followed by a first,

7   time-varying portion, followed by a second, non-time varying portion, followed by a second,

8   time-varying portion, followed by a third, non-time varying portion, one of the first and second,

9   time-varying portions having a positive slope and the other one of the first and second , time-

10   varying portions having a negative slope, wherein the slope of the time varying portions are

11   determined by comparing said input signal to a specified criterion based in part of the various

12   slope requirements for the time varying portions;

13   said shape detector producing a shape detection pulse and an associated value for the

14   second, non-time varying portion each time said predetermined sequence is detected; ~~and~~

15   <u>a time window for determining whether said shape detection pulse is produced at a</u>

16   <u>predetermined rate expected for the series of synchronization pulses; and</u>

17   <u>a voltage window for determining whether the average value of one of said second time-</u>

18   <u>varying portions is substantially lower or the same as, but higher than the lower DC value</u>

19   <u>detected within the time-equivalent of a segment of video; and</u>

20   an evaluator responsive to the produced shape detection pulses and said associated values

21   of said second, non-time varying portions for determining whether one of said associated values

22   of said produced second, non-time varying portions is substantially higher, lower, or the same as

23   a reference value derived from a previous segment of the input signal.

1   21. (Cancelled)

1   22. (Currently Amended) A method for detection of a synchronization pulse from an input

2   signal having a plurality of non-synchronization pulses, comprising:

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3   determining time-varying properties of the input signal having the synchronization pulse;

4   and

5   detecting, from said determined, time-varying properties of the input signal the presence

6   of the synchronization pulse; and

7   determining whether the average value of one of said time-varying portions is

8   substantially lower or the same as, but higher than the lower DC value detected within the time-

9   equivalent of a segment of video.

1   23. (Currently Amended) A method for detection of a synchronization pulse from an input

2   signal having a plurality of non-synchronization pulses, comprising:

3   determining time-varying slopes of an input signal having the synchronization pulse;

4   comparing the determined time-varying slopes with time-varying slopes expected of the

5   synchronization pulse; and

6   producing, based on the comparison, an output signal indicative of the detection of the

7   synchronization pulse;

8   determining whether said output signal is produced at a predetermined rate expected for

9   the series of synchronization pulses; and

10   determining whether the average value of one of said time-varying portions is

11   substantially lower or the same as, but higher than the lower DC value detected within the time-

12   equivalent of a segment of video.

1   24. (Currently Amended) A method for detection of a synchronization pulse having a

2   substantially non-time varying portion and a substantially time-varying portion, the method

3   comprising:

4   determining time varying slopes of one of the portions;

5   comparing the determined time-varying slopes with time-varying slopes expected of the

6   one of the portions of the synchronization pulse; ~~and~~

7   producing, based on the comparison, an output signal indicative of the detection of the

8   synchronization pulse;

9   <u>determining whether said output signal is produced at a predetermined rate expected for</u>

10   <u>the series of synchronization pulses; and</u>

11   <u>determining whether the average value of one of said time-varying portions is</u>

12   <u>substantially lower or the same as, but higher than the lower DC value detected within the time-</u>

13   <u>equivalent of a segment of video.</u>

1   25. (Currently Amended) A method for detection of a synchronization pulse within an input

2   signal, such pulse having a substantially non-time varying portion and a substantially time-

3   varying portion, the method comprising:

4   determining time-varying slopes of the input signal to identify one of the portions;

5   comparing the determined time-varying slopes with time-varying slopes expected of the

6   one identified one of the portions of the synchronization pulse; and

7   producing, based on the comparison, an output signal indicative of the detection of the

8   synchronization pulse;

9   <u>determining whether said output signal is produced at a predetermined rate expected for</u>

10   <u>the series of synchronization pulses; and</u>

11   <u>determining whether the average value of one of said time-varying portions is</u>

12   <u>substantially lower or the same as, but higher than the lower DC value detected within the time-</u>

13   <u>equivalent of a segment of video.</u>

1　26. (Currently Amended)　A method for detection of a synchronization pulse within each

2　of a sequence of input signals having a predetermined rate, such pulse having a

3　substantially non-time varying portion and a substantially time-varying portion, the

4　method comprising:

5　　　determining time-varying slopes of each of the sequence of input signals to

6　identify one of the portions of such one of the input signals;

7　　　comparing the determined time-varying slopes with time-varying slopes expected

8　of the one identified one of the portions of the synchronization pulse;

9　　　producing, based on the comparison, output signals indicative of the detection of

10　the synchronization pulses of the sequence of input signals; and

11　　　comparing rate of production of the output pulses with the predetermined rate of

12　the input signals;

13　　　determining whether said output pulses are produced at a predetermined rate

14　expected for the series of synchronization pulses; and

15　　　determining whether the average value of one of said time-varying portions is

16　substantially lower or the same as, but higher than the lower DC value detected within the

17　time-equivalent of a segment of video.

1　27. (Currently Amended)　A system for detecting a synchronization pulse within an input

2　signal, such synchronization pulse having a substantially non-time varying portion

3　followed by a substantially time-varying portion, the system comprising:

4   a waveform characteristic detector for producing a detection signal in response to

5   a comparison between actual slope variations in the input signal and a predetermined

6   slope criterion representative of one of the portions of the synchronization pulse; and

7   a pulse generator for producing an output pulse in response to the detected signal

8   produced by the waveform characteristic generator

9   a time window for determining whether said output pulse is produced at a

10   predetermined rate expected for the series of synchronization pulses; and

11   a voltage window for determining whether the average value of one of said time-

12   varying portions is substantially lower or the same as, but higher than the lower DC value

13   detected within the time-equivalent of a last segment of video.

1   28. (Currently Amended) A system for detecting a synchronization pulse within an input

2   signal, comprising:

3   an detector responsive to samples of the input signal for separating substantially

4   an non-time varying portion of the input signal from a substantially time varying portion

5   of the input signal;

6   a timer for determining a time duration of one of the portions; and

7   a processor for detecting the synchronization pulse in response to the determined

8   time duration; and

9   a window mechanism for determining whether the average value of one of said

10   time-varying portion is substantially lower or the same as, but higher than the lower DC

11   value detected within the time-equivalent of a last segment of video.

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